

TRANSLATION

PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference GIE044WO	FOR FURTHER ACTION		See Form PCT/IPEA/416
International application No. PCT/EP2005/000659	International filing date (day/month/year) 24.01.2005	Priority date (day/month/year) 26.01.2004	
International Patent Classification (IPC) or national classification and IPC B42D15/00 G02B5/18			
Applicant GIESECKE & DEVRIENT GMBH			

<p>1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.</p> <p>2. This REPORT consists of a total of 14 sheets, including this cover sheet.</p> <p>3. This report is also accompanied by ANNEXES, comprising:</p> <p>a. <input type="checkbox"/> (sent to the applicant and to the International Bureau) a total of _____ sheets, as follows:</p> <p><input type="checkbox"/> sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).</p> <p><input type="checkbox"/> sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.</p> <p>b. <input type="checkbox"/> (sent to the International Bureau only) a total of (indicate type and number of electronic carrier(s)) _____, containing a sequence listing and/or tables related thereto, in electronic form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).</p>																								
<p>4. This report contains indications relating to the following items:</p> <table> <tr> <td><input checked="" type="checkbox"/></td> <td>Box No. I</td> <td>Basis of the report</td> </tr> <tr> <td><input type="checkbox"/></td> <td>Box No. II</td> <td>Priority</td> </tr> <tr> <td><input checked="" type="checkbox"/></td> <td>Box No. III</td> <td>Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</td> </tr> <tr> <td><input checked="" type="checkbox"/></td> <td>Box No. IV</td> <td>Lack of unity of invention</td> </tr> <tr> <td><input checked="" type="checkbox"/></td> <td>Box No. V</td> <td>Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</td> </tr> <tr> <td><input type="checkbox"/></td> <td>Box No. VI</td> <td>Certain documents cited</td> </tr> <tr> <td><input checked="" type="checkbox"/></td> <td>Box No. VII</td> <td>Certain defects in the international application</td> </tr> <tr> <td><input type="checkbox"/></td> <td>Box No. VIII</td> <td>Certain observations on the international application</td> </tr> </table>	<input checked="" type="checkbox"/>	Box No. I	Basis of the report	<input type="checkbox"/>	Box No. II	Priority	<input checked="" type="checkbox"/>	Box No. III	Non-establishment of opinion with regard to novelty, inventive step and industrial applicability	<input checked="" type="checkbox"/>	Box No. IV	Lack of unity of invention	<input checked="" type="checkbox"/>	Box No. V	Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement	<input type="checkbox"/>	Box No. VI	Certain documents cited	<input checked="" type="checkbox"/>	Box No. VII	Certain defects in the international application	<input type="checkbox"/>	Box No. VIII	Certain observations on the international application
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Date of submission of the demand	Date of completion of this report
Name and mailing address of the IPEA/EP	Authorized officer
Facsimile No.	Telephone No.

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Box No. I Basis of the report

1. With regard to the **language**, this report is based on:
 - the international application in the language in which it was filed
 - the translation of the international application into _____, which is the language of a translation furnished for the purposes of:
 - international search (Rule 12.3(a) and 23.1(b))
 - publication of the international application (Rule 12.4(a))
 - international preliminary examination (Rule 55.2(a) and/or 55.3(a))
2. With regard to the **elements** of the international application, this report is based on (*replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report*):
 - the international application as originally filed/furnished
 - the description:

pages 1-22 as originally filed/furnished

pages* _____ received by this Authority on _____

pages* _____ received by this Authority on _____
 - the claims:

nos. 1-28 as originally filed/furnished

nos.* _____ as amended (together with any statement) under Article 19

nos.* _____ received by this Authority on _____

nos.* _____ received by this Authority on _____
 - the drawings:

sheets 1/5-5/5 as originally filed/furnished

sheets* _____ received by this Authority on _____

sheets* _____ received by this Authority on _____
 - a sequence listing and/or any related table(s) – see Supplemental Box Relating to Sequence Listing.
3. The amendments have resulted in the cancellation of:
 - the description, pages _____
 - the claims, nos. _____
 - the drawings, sheets/figs _____
 - the sequence listing (*specify*): _____
 - any table(s) related to sequence listing (*specify*): _____
4. This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).
 - the description, pages _____
 - the claims, nos. _____
 - the drawings, sheets/figs _____
 - the sequence listing (*specify*): _____
 - any table(s) related to sequence listing (*specify*): _____

* If item 4 applies, some or all of those sheets may be marked "superseded."

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Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability

The questions whether the claimed invention appears to be novel, to involve an inventive step (to be non obvious), or to be industrially applicable have not been examined in respect of:

the entire international application
 claims, Nos. 17

because:

the said international application, or said claims Nos. _____ relate to the following subject matter which does not require an international preliminary examination (*specify*):

the description, claims or drawings (*indicate particular elements below*) or said claims Nos. 17 are so unclear that no meaningful opinion could be formed (*specify*):

See supplemental sheet

the claims, or said claims Nos. _____ are so inadequately supported by the description that no meaningful opinion could be formed (*specify*):

no international search report has been established for said claims Nos. _____

a meaningful opinion could not be formed without the sequence listing; the applicant did not, within the prescribed time limit:

- furnish a sequence listing on paper complying with the standard provided for in Annex C of the Administrative Instructions, and such listing was not available to the International Preliminary Examining Authority in a form and manner acceptable to it.
- furnish a sequence listing in electronic form complying with the standard provided for in Annex C of the Administrative Instructions, and such listing was not available to the International Preliminary Examining Authority in a form and manner acceptable to it.
- pay the required late furnishing fee for the furnishing of a sequence listing in response to an invitation under Rules 13ter.1(a) or (b) and 13ter.2.

a meaningful opinion could not be formed without the tables related to the sequence listings; the applicant did not, within the prescribed time limit, furnish such tables in electronic form complying with the technical requirements provided for in Annex C-bis of the Administrative Instructions, and such tables were not available to the International Preliminary Examining Authority in a form and manner acceptable to it.

the tables related to the nucleotide and/or amino acid sequence listing, if in electronic form only, do not comply with the technical requirements provided for in Annex C-bis of the Administrative Instructions.

See Supplemental Box for further details.

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Box No. IV Lack of unity of invention

1. In response to the invitation to restrict or pay additional fees the applicant has, within the applicable time limit:
 - restricted the claims
 - paid additional fees
 - paid additional fees under protest and, where applicable, the protest fee
 - paid additional fees under protest but the applicable protest fee was not paid
 - neither restricted the claims nor paid additional fees
2. This Authority found that the requirement of unity of invention is not complied with and chose, according to Rule 68.1, not to invite the applicant to restrict or pay additional fees.
3. This Authority considers that the requirement of unity of invention in accordance with Rules 13.1, 13.2 and 13.3 is:
 - complied with
 - not complied with for the following reasons:

See supplemental sheet
4. Consequently, this report has been established in respect of the following parts of the international application:
 - all parts
 - the parts relating to claims Nos. _____

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY		International application No. PCT/EP2005/000659																								
Box No. V	Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement																									
<p>1. Statement</p> <table> <tr> <td style="width: 30%;">Novelty (N)</td> <td>Claims</td> <td>1-16, 18-28</td> <td style="width: 10%;">YES</td> </tr> <tr> <td></td> <td>Claims</td> <td></td> <td>NO</td> </tr> <tr> <td>Inventive step (IS)</td> <td>Claims</td> <td></td> <td>YES</td> </tr> <tr> <td></td> <td>Claims</td> <td>1-16, 18-28</td> <td>NO</td> </tr> <tr> <td>Industrial applicability (IA)</td> <td>Claims</td> <td>1-16, 18-28</td> <td>YES</td> </tr> <tr> <td></td> <td>Claims</td> <td></td> <td>NO</td> </tr> </table>			Novelty (N)	Claims	1-16, 18-28	YES		Claims		NO	Inventive step (IS)	Claims		YES		Claims	1-16, 18-28	NO	Industrial applicability (IA)	Claims	1-16, 18-28	YES		Claims		NO
Novelty (N)	Claims	1-16, 18-28	YES																							
	Claims		NO																							
Inventive step (IS)	Claims		YES																							
	Claims	1-16, 18-28	NO																							
Industrial applicability (IA)	Claims	1-16, 18-28	YES																							
	Claims		NO																							
<p>2. Citations and explanations (Rule 70.7)</p> <p>1. Prior art</p> <p>Reference is made to the following documents:</p> <p>D1: DE-A-102 26 115 D2: DE-A-31 30 182 D3: EP-A-0 536 625 D4: WO-A-94/18609 D5: WO-A-99/59036 D6: GB-A-2 136 352</p> <p>2. First invention / Claims 1 to 9, 14 to 22 and 24 to 28:</p> <p>Inventive step:</p> <p>2.1 Independent claims 1 and 22:</p> <p>Document D1, which is regarded as the closest prior art, discloses (see the abstract; figures 1 to 14 and column 1, line 3 to column 9, line 56) a grid image and a method for producing a grid image, from which the subject matter of claims 1</p>																										

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Box No. V **Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**
and 22 differs merely by virtue of the following
(see, for example, claim 1):

"... contains a grid pattern with ruled grid lines, for which at least one of the characteristic parameters orientation, curvature, distance and profiling is varied across the surface of the grid field".

Document D2 (see the abstract; page 9, third paragraph to page 16, second paragraph and figures 1 to 6) describes the same advantages as the present application in relation to this feature. A person skilled in the art would therefore regard the inclusion of this feature in the grid image described in document D1 or in the method described in document D1 as a common measure for solving the problem of interest.

Document D2 discloses, for example in the fourth and fifth paragraphs on page 15, "extremely fine sets of security lines" which, in combination with the grid patterns with ruled grid lines that are depicted in figures 1 and 6, reflect the above mentioned feature from the present claims 1 and 22. It would therefore be obvious to a person skilled in the art to reduce the guilloche pattern described in document D2 in size in order to achieve the diffraction or scattering effects that are essential to the present invention.

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Box No. V **Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

2.2 Claims 2, 7, 9, 14, 16, 18 and 24 to 28:

Document D1 already discloses all the features of the present claims 2, 7, 9, 14, 16, 18 and 24 to 28.

2.3 Claims 3, 5 and 6:

Document D2 already discloses all the features of the present claims 3, 5 and 6.

2.4 Claims 4, 8, 15 and 19:

The features of dependent claims 4, 8, 15 and 19 have already been used for the same purpose in a similar grid image; see

- a) document D3, in particular the abstract; claims 1 to 13 and figures 1 to 6 with regard to the present claim 4; and
- b) document D4, in particular the abstract; page 7, third paragraph to page 21, first paragraph and figure 1 with regard to the present claims 8, 15 and 19.

It would therefore have been obvious for a person skilled in the art to apply those features to like effect to a grid image as per document D1 also and in this way to have arrived at a grid image as per claims 8, 15 and 19.

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PCT/EP2005/000659Box No. V **Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

2.5 Claims 20 and 21:

Dependent claims 20 and 21 concern only minor structural modifications to the grid image according to claim 1, of the kind that a person skilled in the art routinely makes on the basis of familiar considerations, especially since the resulting advantages are readily foreseeable. The subject matter of claims 20 and 21 therefore also fails to involve an inventive step.

3. **Second invention** / claims 10 to 13 and 23:**Inventive step:**

3.1 Independent claims 10 and 23:

Document D5, which is regarded as the closest prior art, discloses (see the abstract; page 3, line 6 to page 19, line 31 and figures 1 to 3) a grid image and a method for producing a grid image having all the features specified in the preambles of the present claims 10 and 23. In particular, figure 1 shows a grid image with a plurality of grid fields. Claims 10 and 23 differ from the teaching in document D5 by virtue of the feature appearing in the characterising part of both claims.

Document D6 (see the abstract; figures 1 to 9, page 4 and page 6, lines 16 to 39) describes the same advantages as the present application in

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Box No. V **Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

relation to that feature. A person skilled in the art would therefore regard the inclusion of that feature in the grid image described in document D5 or in the method described in D5 for producing a grid image as a common measure for solving the problem of interest.

In view of the problem indicated in the introductory part of the description, it is clearly obvious to a person skilled in the art to transfer the security element in the form of a grid image with a plurality of adjacent grid fields as per document D6 to the security element in the form of a grid image with a plurality of adjacent grid fields as per document D5.

3.2 Dependent claims 11 to 13:

3.2.1 Dependent claims 11 to 13 do not contain any features which, in combination with the features of any claim to which they refer, meet the PCT requirements for novelty and inventive step. The reasons are as follows:

3.2.2 Claim 11:

Document D6 already discloses the feature from the present claim 11.

3.2.3 Claims 12 and 13:

Dependent claims 12 and 13 concern only minor

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Box No. V **Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

structural modifications to the grid image according to claim 10, of the kind that a person skilled in the art routinely makes on the basis of familiar considerations, especially since the resulting advantages are readily foreseeable. The subject matter of claims 12 and 13 thus also fails to involve an inventive step.

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Box No. VII Certain defects in the international application

The following defects in the form or contents of the international application have been noted:

Description:

Contrary to PCT Rule 5.1(a) (ii), the description does not cite documents D2 to D6 or indicate the relevant prior art disclosed therein.

Supplemental Box

In case the space in any of the preceding boxes is not sufficient.

Continuation of: Boxes III and IV

Box III.**Clarity:**

1. The application does not meet the requirements of PCT Article 6 because dependent claim 17 is not clear.

2. The only feature in product claim 17 refers to a method for producing the product and not to the definition of the product in terms of its technical features. Therefore, contrary to PCT Article 6, the intended limitations are not clear from claim 17.

Box IV.

1. The different inventions are:
 - I. Claims 1 to 9 and 22 and, insofar as dependent thereon, also claims 14 to 21 and 24 to 28:
 - grid image with varied parameters on the inside of its surface.

 - II. Claims 10 to 13 and 23 and, insofar as dependent thereon, also claims 14 to 21 and 24 to 28:

Supplemental Box

- transition between adjacent, mutually different grid fields of a grid image.

2. Reasoning:

The above inventions are not so linked as to form a single general inventive concept (PCT Rule 13.1) for the following reasons:

a grid image with at least one varied parameter on the inside of the surface of the image, as per the essential feature of the first invention according to the two independent claims, claims 1 and 22, is already known to a person skilled in the art from document D2 (DE-A-3 130 182); see the abstract; figures 1, 5 and 6; page 10, second to fourth paragraphs and page 14, line 1 to page 16, last line.

A grid image **with a grid field** as per the present claims 1 and 22 does not necessarily have either a continuous variation, which is defined merely as an **optional feature in dependent claim 3**, or an adjacent grid field, which according to the essential feature of the second invention as per the two independent claims, claims 10 and 23, must also comprise a continuous transition region. A single grid image as per the first invention, without an adjacent grid image, would also have no transition region.

Supplemental Box

Moreover, a grid image with a plurality of adjacent grid fields with continuous transitions in characteristic parameters between the fields is already known from document D5 (WO-A-99/59036); see the abstract; page 3, line 6 to page 19, line 31 and figures 1 to 3.

3. Contrary to PCT Rule 13.1, there is no link in the sense of a technical interrelationship between the above two inventions which is expressed in all independent claims by the same or corresponding special technical features.